

## CLAIMS

What is claimed is:

1. An article comprising:  
a silicon wafer having a plurality of integrated circuits terminated on a surface of the silicon wafer; and  
a soluble protective coat on the surface of the silicon wafer.
2. The article of claim 1 further comprising die bumps coupled to the surface wherein the soluble protective coat covers the die bumps.
3. The article of claim 1 wherein the soluble protective coat is one of a flux, a film, a tape, a polymer, and an organic solderability preservative.
4. The article of claim 1 wherein the soluble protective coat is a water soluble flux.
5. The article of claim 4 wherein the flux is soluble in water at room temperature.
6. The article of claim 1 wherein the soluble protective coat is optically transparent.
7. The article of claim 1 wherein the soluble protective coat is adapted to be ablated by laser scribing.
8. The article of claim 1 wherein the silicon wafer has a low dielectric constant.
9. A method for separating a silicon wafer, the method comprising:  
coating a surface of the silicon wafer with a soluble protective coat; and  
laser scribing the coated surface of the silicon wafer.
10. The method of claim 9 wherein the soluble protective coat is one of a flux, a film, a tape, a polymer, and an organic solderability preservative.
11. The method of claim 9 further comprising washing the silicon wafer with a solvent.

12. The method of claim 11 wherein the soluble protective coat is a water soluble flux and the solvent is water.
13. The method of claim 12 wherein the washing is with water at room temperature.
14. The method of claim 9 wherein the silicon wafer includes die bumps and the coating includes coating the die bumps with the soluble protective coat.
15. The method of claim 9 wherein the soluble protective coat is optically transparent.
16. The method of claim 9 wherein the soluble protective coat is ablated by the laser scribing.
17. The method of claim 9 further comprising saw cutting the silicon wafer under a flow of solvent sufficient to remove at least a substantial portion of the soluble protective coat.
18. The method of claim 17 wherein the soluble protective coat is a water soluble flux and the solvent is water.
19. The method of claim 18 wherein the saw cutting is under a flow of water at room temperature.
20. A method for separating a silicon wafer, the method comprising:  
saw cutting the silicon wafer having a soluble protective coat; and  
providing a flow of solvent during the saw cutting, the flow of solvent  
being sufficient to remove at least a substantial portion of the  
soluble protective coat.
21. The method of claim 20 wherein the soluble protective coat is one of a  
flux, a film, a tape, a polymer, and an organic solderability preservative.
22. The method of claim 20 wherein the soluble protective coat is a water  
soluble flux and the solvent is water.

23. The method of claim 22 wherein the water is at room temperature.
24. The method of claim 20 wherein the silicon wafer includes die bumps and the soluble protective coat covers the die bumps.
25. The method of claim 20 further comprising laser scribing the silicon wafer before saw cutting.
26. The method of claim 25 wherein the soluble protective coat is optically transparent.
27. The method of claim 25 wherein the soluble protective coat is ablated by the laser scribing.
28. The method of claim 25 wherein the soluble protective coat is a water soluble flux and the solvent is water.
29. The method of claim 27 wherein the solvent is water at room temperature.
30. The method of claim 20 wherein solvent is pressurized sufficiently to remove at least a substantial portion of the soluble protective coat.